

Assignment-7

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Download all python codes from

<https://github.com/BatharajuRamana/Assignment7/tree/main/Assignment7>

and latex-tikz codes from

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1 QUESTION No-2.70

Find \mathbf{p}^{-1} . if it exists, given $\mathbf{p} = \begin{pmatrix} 10 & -2 \\ -5 & 1 \end{pmatrix}$

2 SOLUTION

Given that

$$\mathbf{p} = \begin{pmatrix} 10 & -2 \\ -5 & 1 \end{pmatrix} \quad (2.0.1)$$

$$\xleftrightarrow{R_1 \leftarrow R_2} \begin{pmatrix} -5 & 1 \\ 10 & -2 \end{pmatrix} \quad (2.0.2)$$

$$\xleftrightarrow{R_1 \leftarrow R_1 / -5} \begin{pmatrix} 1 & -\frac{1}{5} \\ 10 & -2 \end{pmatrix} \quad (2.0.3)$$

$$\xleftrightarrow{R_2 \leftarrow -5R_1} \begin{pmatrix} 1 & -\frac{1}{5} \\ 0 & -12 \end{pmatrix} \quad (2.0.4)$$

$$\xleftrightarrow{R_2 \leftarrow R_2 / -12} \begin{pmatrix} 1 & -\frac{1}{5} \\ 0 & 1 \end{pmatrix} \quad (2.0.5)$$

Does not exists \mathbf{p}^{-1}